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Form 1449 (Modified) Information Disclosure Statement By Applicant (Use Several Sheets if Necessary)	Atty Docket No. CISC601C1 Application No.: 09/435,246 Inventor GREGORY G. RALEIGH Group 2734 2634 Filing Date November 5, 1999
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U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
CF	AA	4,337,376	06/1982	Gruenberg	179	2 EB	12/1979
CF	AB	4,710,944	12/1987	Nossen	375	40	10/1986
CF	AC	5,134,715	07/1992	Parl et al.	455	64	11/1989
CF	AD	5,228,025	07/1993	Le Floch et al.	370	20	01/1991
CF	AE	5,315,584	05/1994	Savary et al.	370	18	12/1991
CF	AF	5,345,599	09/1994	Paulraj et al.	455	49.1	02/1992
CF	AG	5,471,647	11/1995	Gerlach et al.	455	63	04/1993
CF	AH	5,479,444	12/1995	Malkamaki et al.	375	231	02/1994
CF	AI	5,510,779	04/1996	Wishart	342	373	06/1993
CF	AJ	5,515,378	05/1996	Roy, III et al.	370	95.1	12/1991
CF	AK	5,548,819	08/1996	Robb	455	59	08/1995
CF	AL	5,566,209	10/1996	Forssen et al.	375	262	02/1994
CF	AM	5,592,490	01/1997	Barrett et al.	370	310	01/1995

Foreign Patent or Published Foreign Patent Application

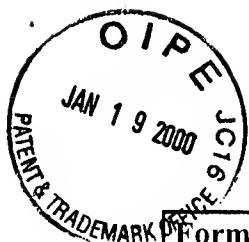
Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
CF	AN	WO 95/22873	08/1995	PCT	—	—		
CF	AO	WO 96/30964	10/1996	PCT	—	—		
CF	AP	WO 98/09381	03/1998	PCT	—	—		

Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
CF	AQ	Hirano et al., "Digital terrestrial television broadcasting with OFDM - A study on the performance of single frequency networks" 1996, Int'l Broadcasting Convention, p. 178-183.
Examiner <i>Chet Mc I</i>		Date Considered <i>2/28/01</i>

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U.S. Patent Documents

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CF	BA	5,634,199	05/1997	Gerlach et al.	455	63	04/1995
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CF	BE	5,752,173	05/1998	Tsujimoto	455	137	06/1995
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Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
CF	BI	WO 98/09395	03/1998	PCT	—	—		
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Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
CF	BK	P.A. Voois, "Two-dimensional signal processing for magnetic storage systems", 1993, Ph.D. Thesis, Stanford University, pp. 1-136.
CF	BL	Biglieri et al., "Introduction to trellis coded modulation with applications", 1991, MacMillan Publishing.
CF	BM	P. Lancaster, "Theory of matrices", 1969, Academic Press, Chap. 2.
CF	BN	Raleigh et al., "Spatio-temporal coding for wireless communications", 1996, IEEE Transactions on Communications.
Examiner <i>Chun Mui Fa</i>		Date Considered <i>2/28/01</i>

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U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	CA						

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
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Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
CF	CC	Justin C.I. Chuang, "Burst coherent demodulation with combined symbol timing, frequency offset estimation and diversity selection", 1991, IEEE, Vol. 39, no. 7, pp. 1157-1164.
CF	CD	Leonard J. Cimini, Jr., "Analysis and simulation of a digital mobile channel using orthogonal frequency division multiplexing", 1985, IEEE, Vol. 33, No. 7, pp. 665-675.
CF	CE	Kouichi Ohkawa, "Performance of multicarrier trellis-coded 8PSK using frequency hopping in rayleigh fading channels", 1994, Not. Conference Publication - Institution of Engineers, Vol. 1, pp. 145-149.
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CF	CG	Hirofumi Ichikawa, "Frequency diversity effects in multicarrier digital radio systems", 1991, Electronics and Communications in Japan, Prt. 1, Vol. 74, No. 8, pp. 70-77.
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Chet M. Ja	2/28/01	

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U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	DA						

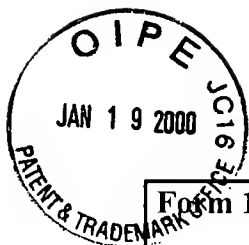
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Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
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CF	DC	J. L. Holsinger, "Digital communications over fixed time-continuous channels with memory, with special application to telephone channels", 1964, NT Research Laboratory Electronics Report, Vol. 430.
CF	DD	Cover et al., "Elements of information theory", 1991, New York: John Wiley, Chp. 2, pps. 12-49, Chp. 8 pps. 183-223, and Chap. 10 pps. 239-265
CF	DE	R.J. Muirhead, "Aspects of multivariate statistical theory", 1982, New York: John Wiley, Chps. 4 and 5.
CF	DF	W.C. Jakes, "Microwave mobile communications", 1974, New York: John Wiley, Chps. 1, 5, and 6.
CF	DG	Braun et al., "A physical mobile radio channel model", 1991, IEEE Vehicular Technolpgy, Vol. 40, pps. 472-482.
CF	DH	Bryson et al., "Applied optimal control", 1968, Washington D.C. Hemisphere Publishing, pps. 24-29.
Examiner <i>Chick W. F.</i>		Date Considered <i>2/28/01</i>

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	Group	2734 2634
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U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	EA						

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
	EB							

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Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
cf	EC	Cioffi et al., "Vector coding for partial-response channels", 1990, IEEE Transactions on Information Theory, Vol. 36, pp. 741-762.
cf	ED	Mikael Gudmundson, "Spectral efficiency of a multitone frequency hopping system for personal communication systems", 1994, IEEE Vehicular Technology Conferences, prt. 3, Vol. 3, p. 1650-1654.
cf	EE	T. Aron Gulliver, "Order statistics diversity combining in worst case noise and multitone jamming", 1995, IEEE Vehicular Technology Conference, Vol. 2, pp. 804-809.
cf	EF	R. Monnier, "Digital television broadcasting with high spectral efficiency", 1992, IEEE Conference Pub. No. 358, pps. 380-384.
cf	EG	Enrico Del Re, "Digital Multicarrier demodulator for regenerative communication satellites", 1988, Alta Frequenza, Vol. 57, No. 10, pps. 545-559.
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	Inventor	GREGORY G. RALEIGH
	Group	2734 2634
	Filing Date	November 5, 1999

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	FA						

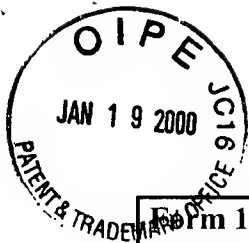
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Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
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cf	FC	Youko Omori, "Multicarrier 16QAM system in land mobile communications", 1994, IEICE Transactions on Communications, Vol. E77-B, No. 5, pps. 545-559.
cf	FD	Fulvio Ananasso, "Clock synchronous multicarrier demodulator for multi-frequency TDMA communications satellites", 1990, IEEE International Conference on Communications, Col. 3, pps. 1059-1063.
cf	FE	M. Friese, "Multicarrier modulation with low peak-to-average power ratio", 1996, Electronics Letters, Vol. 32, No. 8, pps. 713-714.
cf	FF	Adil Benyassine, "Optimal subchannel structuring and basis selection for discrete multicarrier modulation", 1995, IEEE Communications Theory Mini-Conference Proceedings, CTMC, pps. 97-101.
cf	FG	M. Sawahashi, "Multicarrier 16QAM transmission with diversity reception", 1996, Electronics Letters, Vol. 32, No. 6, pps. 522-523.
Examiner <i>Chick M. Jr</i>		Date Considered <i>5/28/01</i>

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U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	GA						

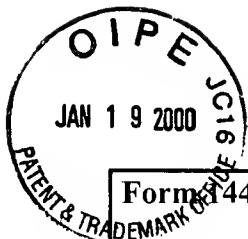
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Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
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cf	GD	C.E. Shannon, "Mathematical theory of communications: Part I and Part II", 1948, The Bell System Journal, pps. 379-423, 623-656.
cf	GE	Fectel et al., "Optional feedforward estimation of frequency-selective fading radio channels using statistical channel information", 1992, in Proc. SUPERCOMM/ICC '92, Vol. 2.
cf	GF	Brandenburg et al., "Capacity of the gaussian channel with memory: the multivariate case", 1993, Bell System Technical Journal, Vol. 53, pps. 745-78.
CF	GG	Cheng et al., "Gaussian multiaccess channels with ISI: Capacity region and multiuser water-filling", 1993, IEEE Trans. Inform. Theory, Vol. 39(3), pps. 773-785.
cf	GH	J. Salz, "Digital transmission over cross-coupled linear channels", 1985, AT&T Tech. Journal, Vol. 64(6), pps. 1147-1159,
Examiner <i>Chet Mc L</i>		Date Considered <i>1-28-01</i>

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Form 449 (Modified) Information Disclosure Statement By Applicant (Use Several Sheets if Necessary)	Atty Docket No.	CISCP601C1
	Application No.:	09/435,246
	Inventor	GREGORY G. RALEIGH
	Group	2734 2634
	Filing Date	November 5, 1999

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	HA						

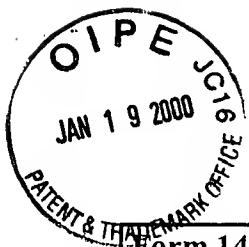
Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
	HB							

Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
CF	HC	A. Duel-Hallen, "Equalizers for multiple input multiple output channels and PAM systems with cyclostationary input sequences", 1992, IEEE Journal on Sel. Areas in Comm., Vol. 10(3), pps. 630-639.
CF	HD	Yang et al., "On joint transmitter and receiver optimization for multiple-input multiple-output (MIMO) transmission systems", 1994, IEEE Trans. Commun., Col. 42-(12), pps. 3221-3231.
CF	HE	Yang et al., "Joint transmitter-receiver optimization for multi-input multi-output systems with decision feedback", 1994, IEEE Trans. Information Theory, Vol. 40(5), pps. 1334-1347.
CF	HF	Cox et al., "Distributions of multipath delay spread and average excess delay for 910 Mhz urban mobile radio paths", 1975, IEEE Trans. Antennas and Prop., Vol. Ap-23, pps. 206-213.
CF	HG	Weinstein et al., "Data transmission by frequency-division multiplexing using the discrete fourier transform", 1971, IEEE transactions on communications, vol. 19(5), pps. 628-634.
Examiner <i>Chil M. L.</i>		Date Considered <i>2/28/01</i>

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U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	IA						

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
	IB							

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CF	IC	Ruiz et al., "Discrete multiple tone modulation with coset coding for the spectrally shaped channel", 1992, IEEE Trans. Commun, Vol. 40(6), pps. 1012-1029.
CF	ID	R.M. Gray, "On the asymptotic eigenvalue distribution of toeplitz matrices", 1972, IEEE Trans. Information Theory, Vol. 18, pps. 725-730.
CF	IE	G. Forney, "Maximum-likelihood sequence estimation of digital sequences in the presence of intersymbol interference", 1972, IEEE Trans. Inform. Theory, Vol. IT-18(3), pps. 363-378,
Examiner <i>Cheryl H. Z</i>		Date Considered <i>2/28/01</i>

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